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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,989	02/08/2002	Randy Dinkins	028750-219	9928

7590 08/11/2006

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EXAMINER

KUBELIK, ANNE R

ART UNIT PAPER NUMBER

1638

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,989

Applicant(s)

DINKINS ET AL.

Examiner

Anne R. Kubelik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,9,15-27,32,33 and 35-40 is/are pending in the application.
- 4a) Of the above claim(s) 3,8,9,15-27 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 8-9, 15-27, 32-33 and 35-40 are pending.
2. This application contains claims 8-9, 15-27 and 32-33 and claims reciting *Arabidopsis* MinE, both of which are drawn to inventions nonelected with traverse in Paper No. 10. A complete reply to the final rejection must include cancellation of nonelected claims and deletion of nonelected subjected matter from the examined claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. The rejection of claims 1-7, 10-13, 28-31 and 34 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a vector encoding the *Arabidopsis* MinD protein, plants and cells transformed with it and a method of using it to produce a plant with one or few chloroplasts, does not reasonably provide enablement for vectors comprising a gene encoding a protein with the same functional activity as the *Arabidopsis* MinD protein or having a “significant amount of homology to” the *Arabidopsis* MinD protein, plants and cells transformed with them and a method of using them to produce a plant with one or few chloroplasts is withdrawn in light of Applicant's amendment of the claims.
5. The rejection of claims 1-7, 10-13, 28-31 and 34 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn in light of Applicant's amendment of the claims.
6. The rejection of claims 1-7, 10-13, 28-31 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

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subject matter which applicant regards as the invention is withdrawn in light of Applicant's amendment of the claims.

7. The rejection of claims 1-7, 10-13, 28-31 and 34 under 35 U.S.C. 102(a) as being anticipated by Colletti et al (2000, Curr. Biol. 10:507-516) is withdrawn in light of Applicant's amendment of the claims.

8. The rejection of claims 1-7, 10-13, 28-31 and 34 under 35 U.S.C. 102(a) as being anticipated by Kanamaru et al (2000, Plant Cell Physiol. 41:1119-1128 and GenBank Accession No. AB030278, December 2000) is withdrawn in light of Applicant's amendment of the claims.

9. The rejection of claims 1-7, 10-14 and 28-30 under 35 U.S.C. 102(b) as being anticipated by Osteryoung (US Patent 6,982,364, filed April 1999) is withdrawn in light of Applicant's amendment of the claims.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 35-40 rejected under 35 U.S.C. 103(a) as being unpatentable over Osteryoung (US Patent 6,982,364, filed April 1999) in view of each of Heifetz (2000, Biochimie 82:655-666) and Maliga (1999, Engineering the Plastid Genome: Problems and Potential, *In: Plant Biotechnology and In Vitro Biology in the 21st Century*, Altman et al, eds, Kluwer Academic Publishers, The Netherlands, pg 173-176).

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The claims are drawn to tobacco plant cells comprising an exogenous gene that encodes an Arabidopsis MinD protein and methods of making the plants from the cells.

Osteryoung teaches plants comprising an exogenous gene that encodes an Arabidopsis MinD protein and methods of making the plants (claims 1-8 and 23-25). Osteryoung teaches that the plants are useful as more efficient starting material for plastid transformation (column 2, lines 16-28). Osteryoung does not disclose that the plants are from tobacco.

Heifetz teaches that plastid transformation is restricted to tobacco and related solanaceous plants, and the reason is related to its tissue culture growth characteristics and the selectable markers available for plastids transformation (pg 658, right column, ¶2).

Maliga teaches that plastid transformation is routinely and efficiently practiced only in tobacco (pg 174, ¶2).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method of making plants comprising an exogenous gene that encodes an Arabidopsis MinD protein as taught by Osteryoung, to transform tobacco plants and plant cells with that exogenous gene. One of ordinary skill in the art would have been motivated to do so because Osteryoung teaches that the use for plants with larger plastids is for more efficient plastid transformation(column 2, lines 16-28) and each of Heifetz and Maliga teach that plastid transformation can only be reliably done in tobacco (Heifetz, pg 658, right column, ¶2; Maliga, pg 174, ¶2).

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Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne R. Kubelik, whose telephone number is (571) 272-0801. The examiner can normally be reached Monday through Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg, can be reached at (571) 272-0975.

The central fax number for official correspondence is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Anne Kubelik, Ph.D.
July 27, 2006



ANNE KUBELIK, PH.D.
PRIMARY EXAMINER